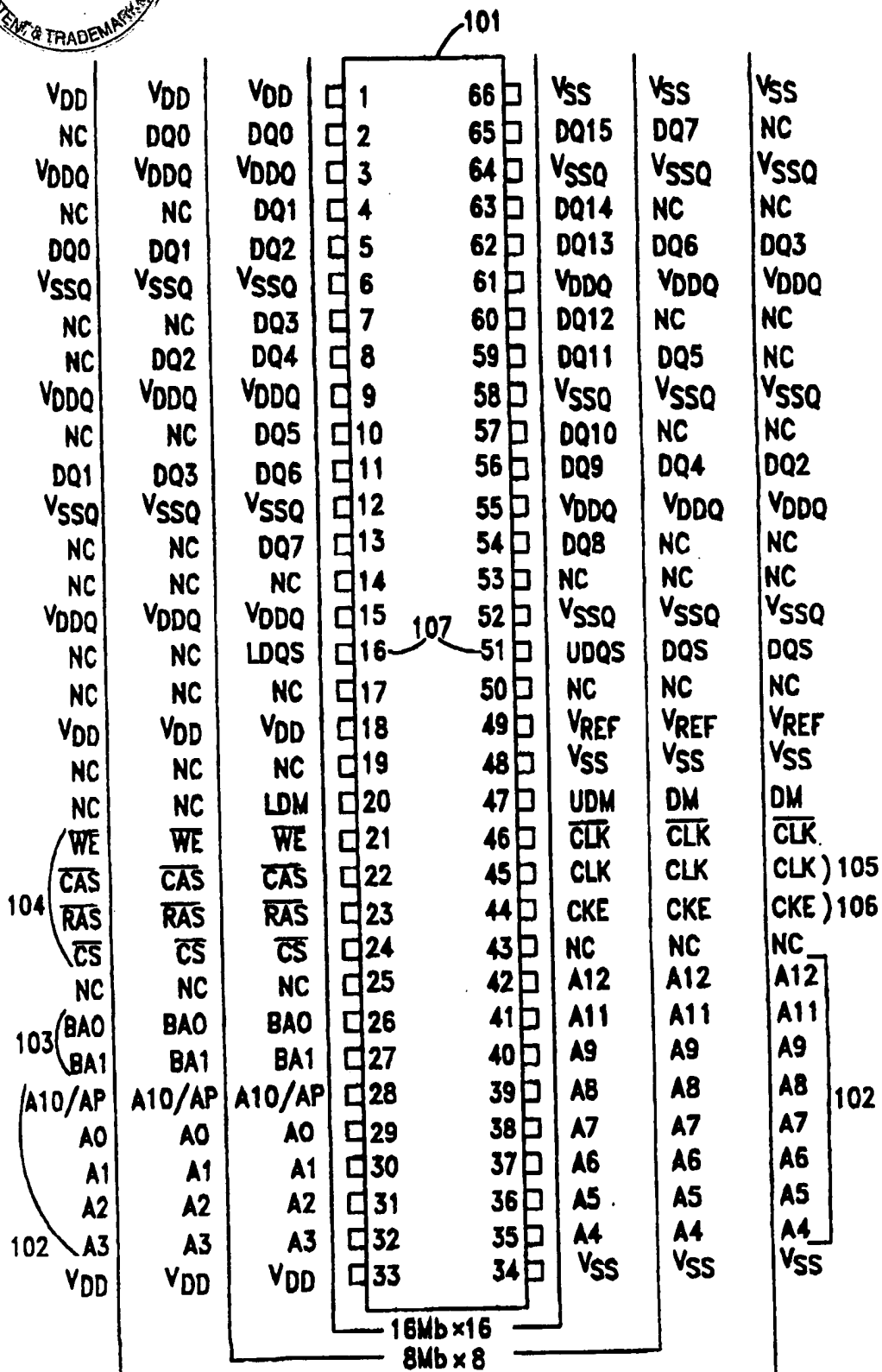




FIG. 1



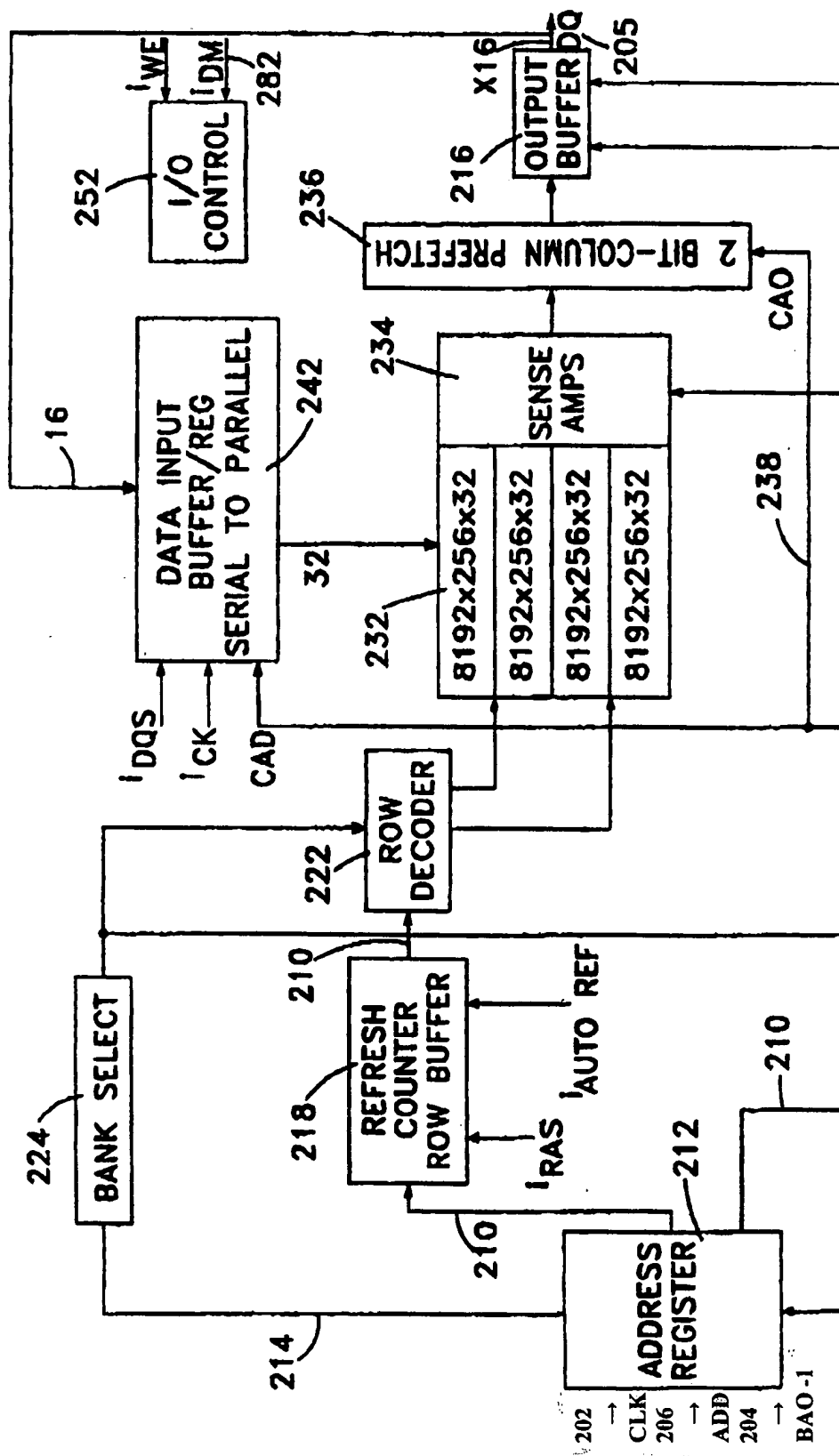


FIG. 2A

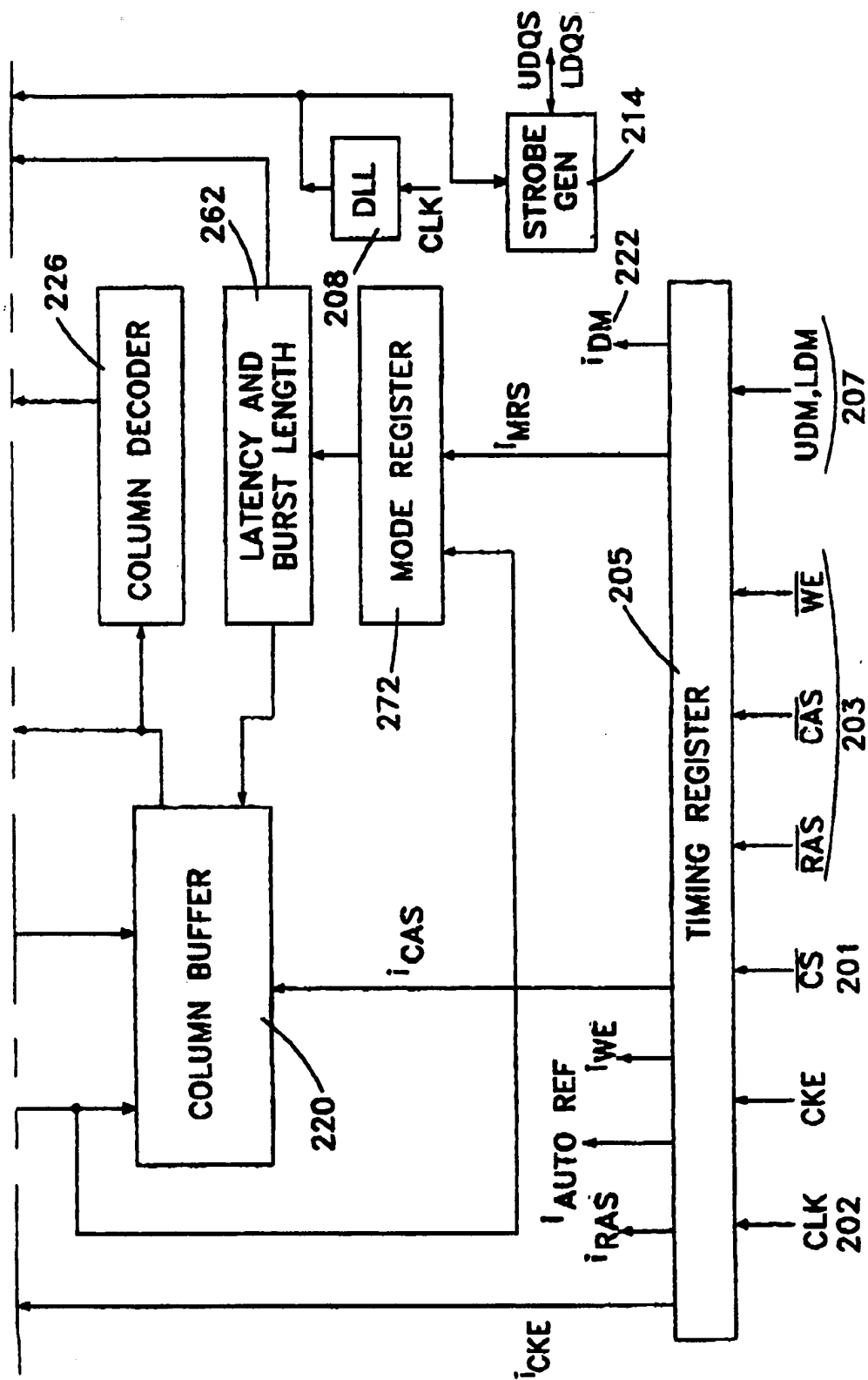


FIG. 2 B

Operation	CKE		CS	RAS	CAS	WE	DM	BA ₀ BA ₁	A ₁₀	A ₀ A ₈ A ₁₁	MNE	Notes
	n-1	n										
Device Deselect	H	X	H	X	X	X	X	X	X	X	INHBT	
No Operation	H	X	L	H	H	H	X	X	X	X	NOP	
Load Mode Register Mode or Extended Mode Register	H	X	L	L	L	L	X	OP CODE			MRS/EMRS	1
Row Activate	H	X	L	L	H	H	X	BS	Row Address		ACT	2
Read	H	X	L	H	L	H	X	BS	L	Col	RD	3
Read w/ Auto Precharge	H	X	L	H	L	H	X	BS	H	Col	RAP	3
Write	H	X	L	H	L	L	V	BS	L	Col	WR	3,4
Write w/ Auto Precharge	H	X	L	H	L	L	V	BS	H	Col	WAP	3,4
Burst Stop	H	X	L	H	H	L	X	X	X	X	BST	5
Precharge Single Bank	H	X	L	L	H	L	X	BS	L	X	PRE	
Precharge All Banks	H	X	L	L	H	L	X	X	H	X	PREALL	
Auto Refresh	H	H	L	L	L	H	X	X	X	X	REF	1
Self Refresh Entry	H	L	L	L	L	H	X	X	X	X	SR(ENTRY)	1
Self Refresh Exit	L	H	H	X	X	X	X	X	X	X	SR(EXIT)	
	L	H	L	H	H	H	X	X	X	X		
Power Down Mode (Entry)	H	L	H	X	X	X	X	X	X	X	PDN(ENTRY)	
	H	L	L	H	H	H	X	X	X	X		
Power Down Mode (Exit)	L	H	X	X	X	X	X	X	X	X	PDN(EXIT)	
1. Should be issued only after both banks are deactivated (PREALL command). 2. Should be issued only after the corresponding bank has been deactivated (PRE command). 3. Should be issued after the corresponding bank has been activated (ACT command). 4. Any valid Write cycles applied to the selected bank/row will be masked according to the DM. 5. Should be issued only during read burst cycles.												

FIG. 3

FIG. 4A

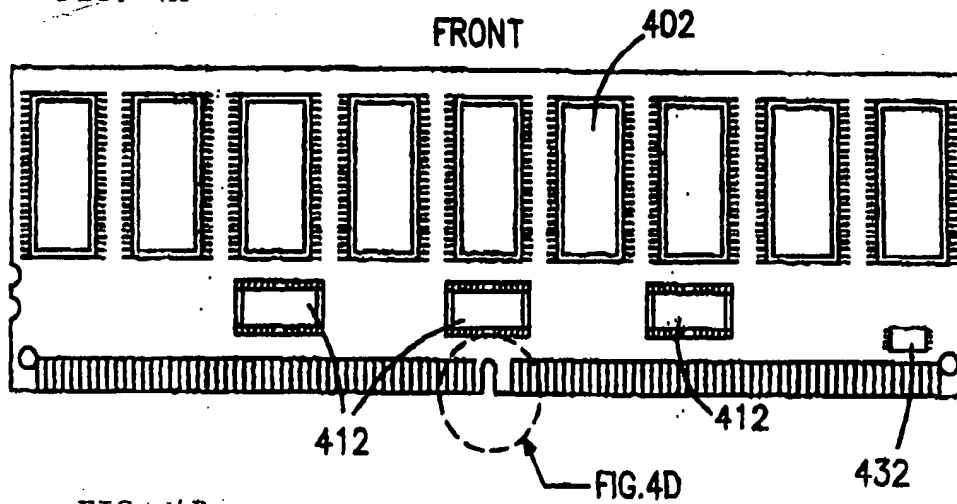
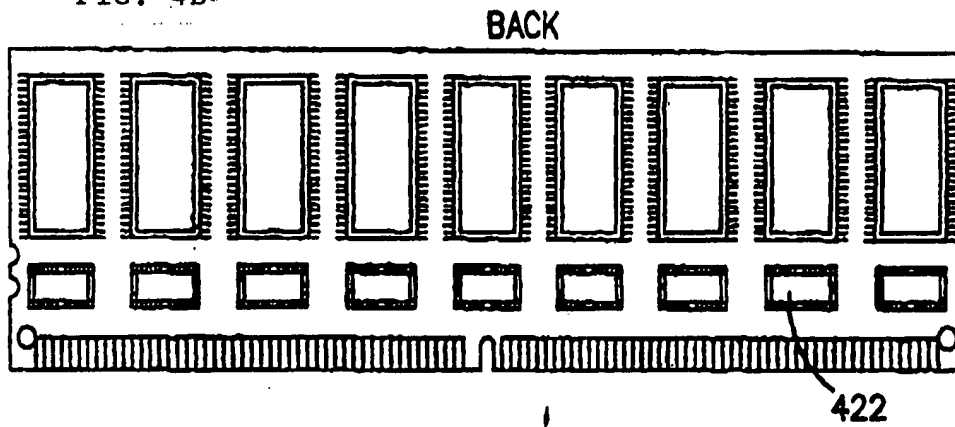


FIG. 4B



SIDE



FIG. 4C

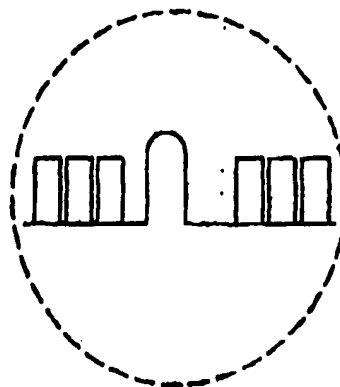


FIG. 4D

FIG. 5A

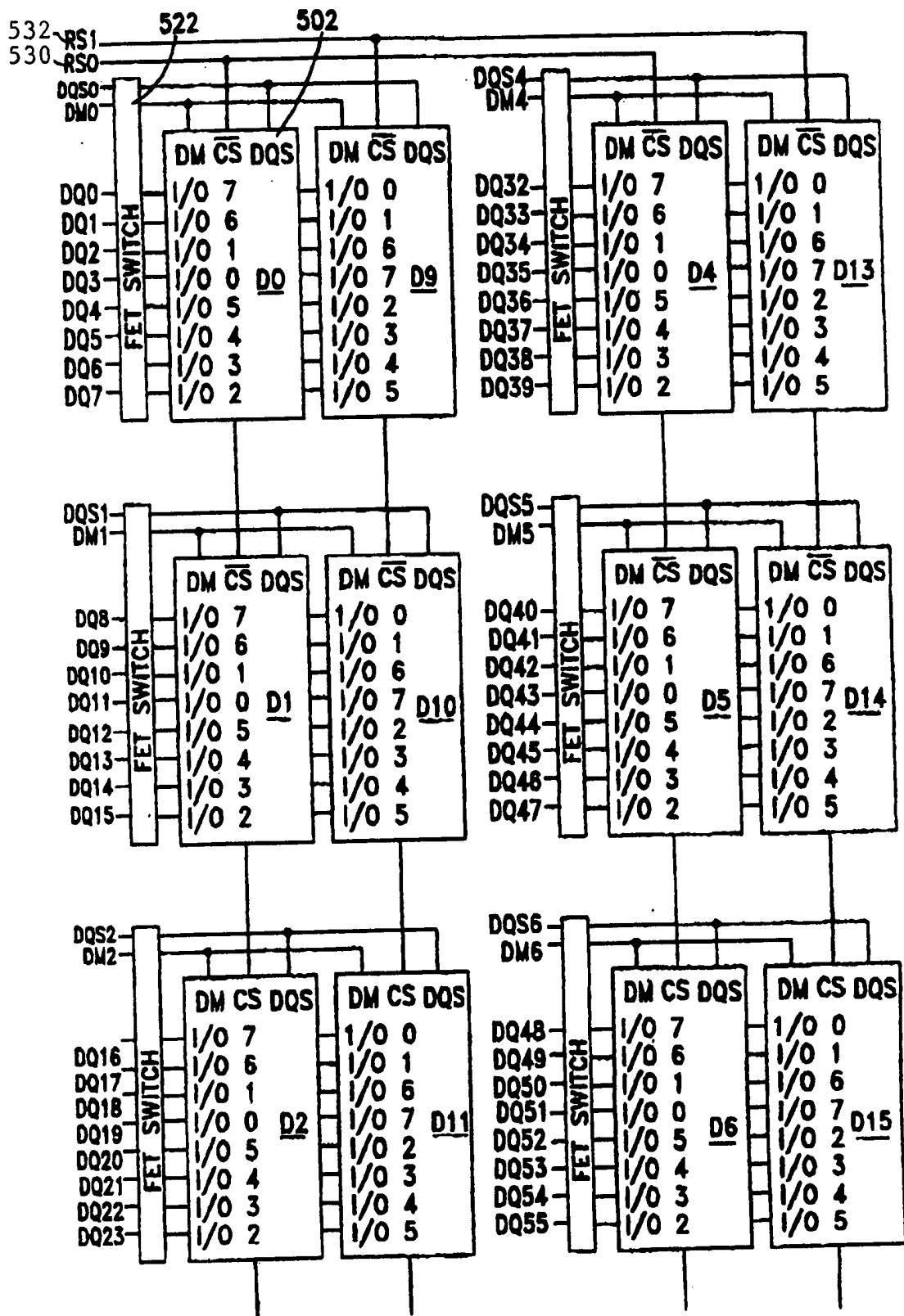


FIG. 5B

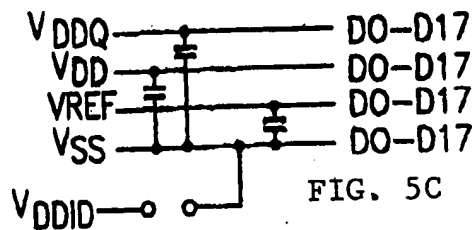
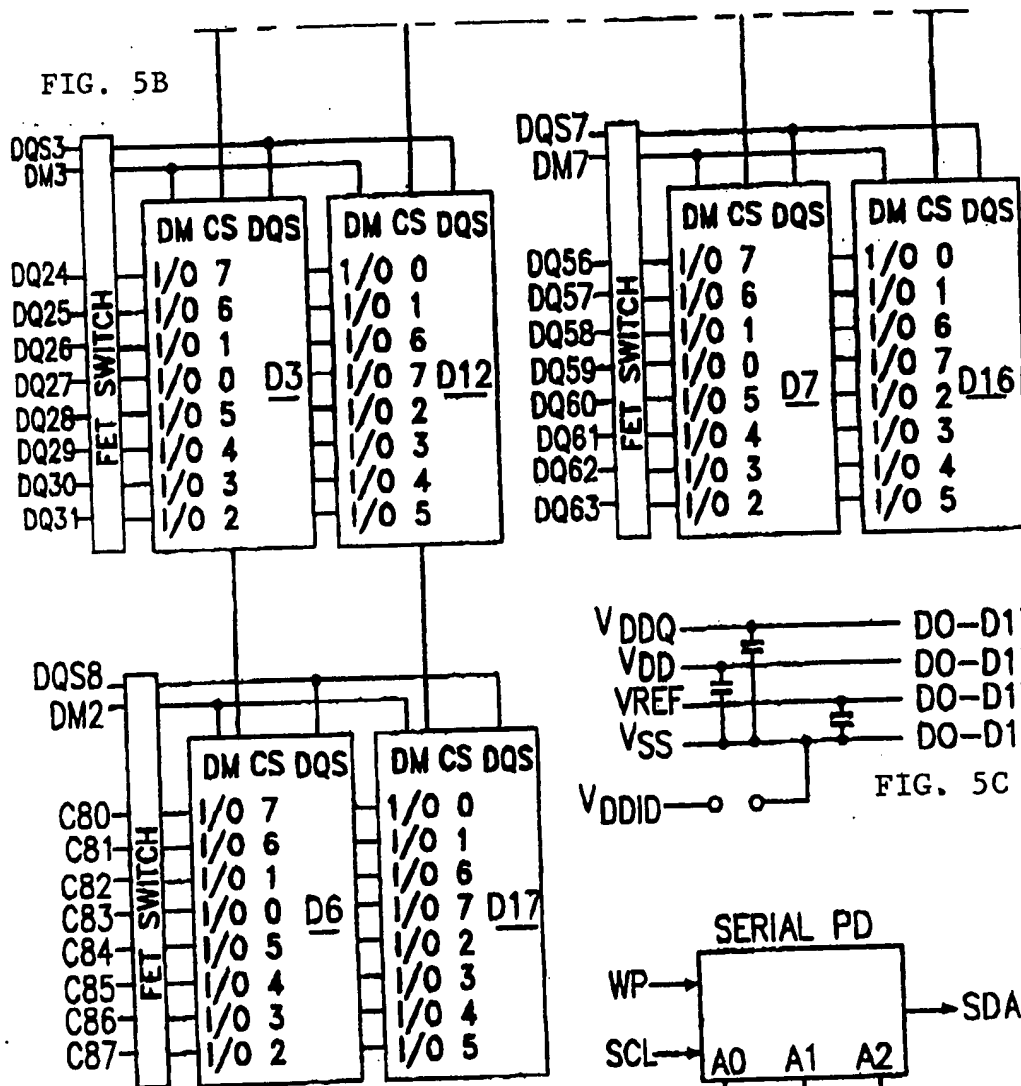


FIG. 5C

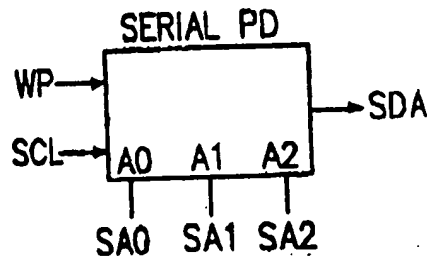


FIG. 5E

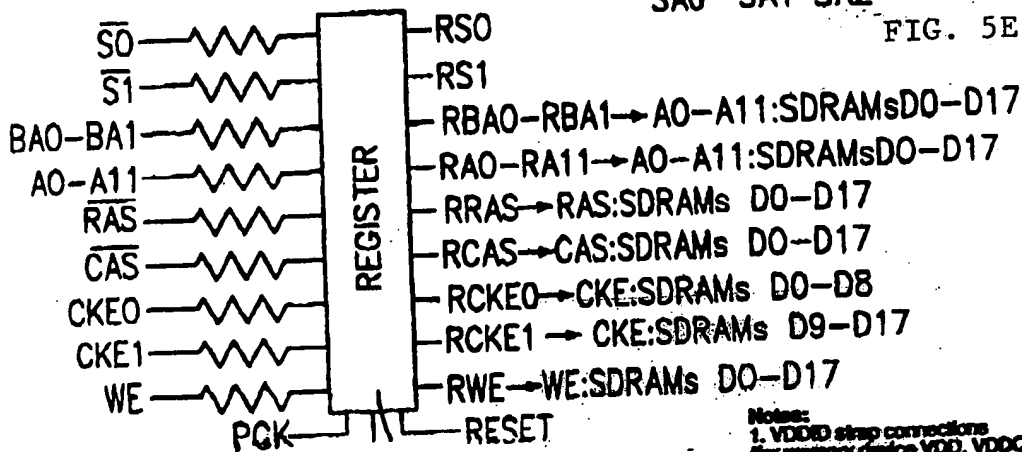


FIG. 5D

Notes:
1. VDDID strap connections for memory device VDD, VDDQ: STRAP OUT (OPEN): VDD = VDDQ STRAP IN (VSS): VDD = VDDQ.
2. See FET switch detail for more information.

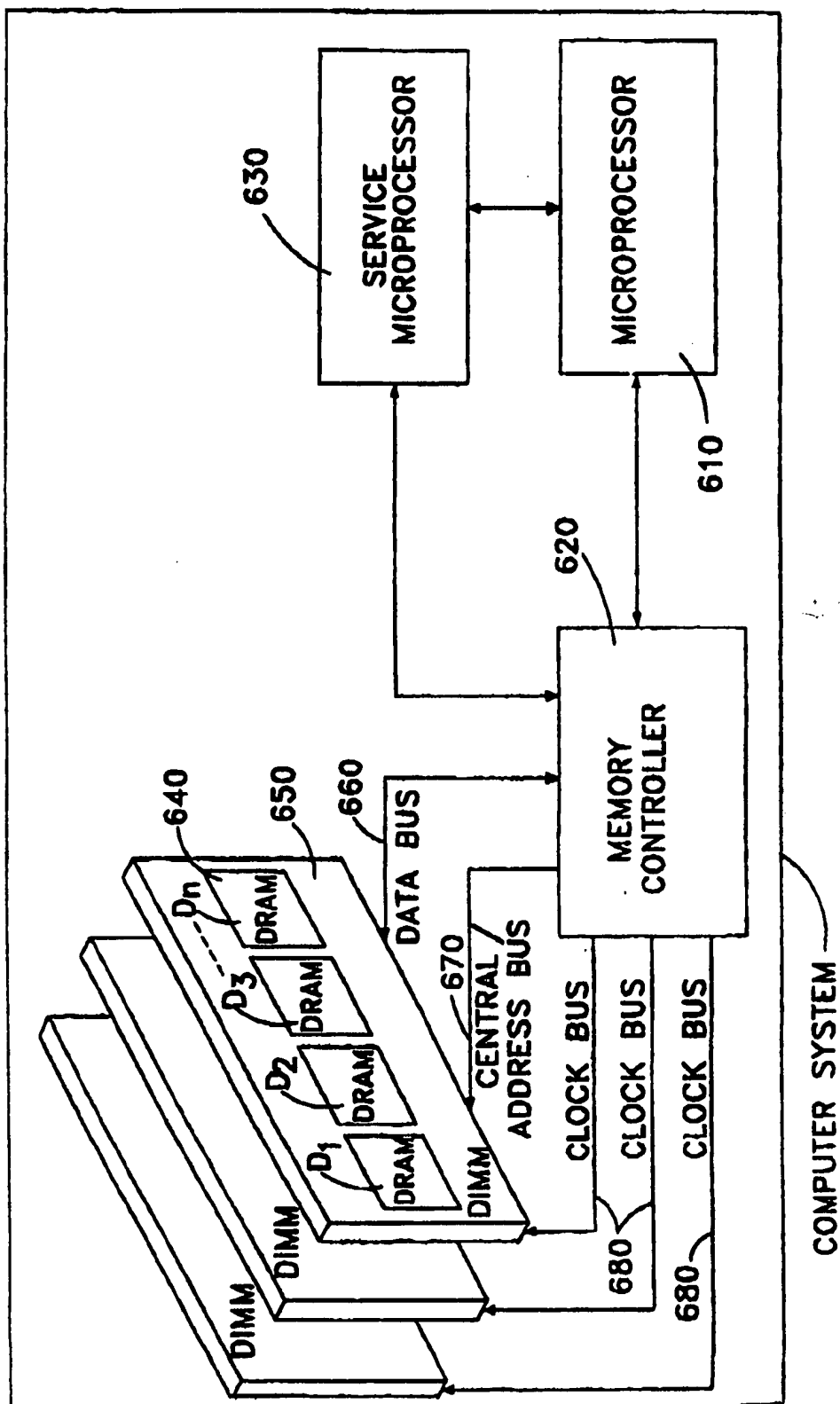


FIG. 6

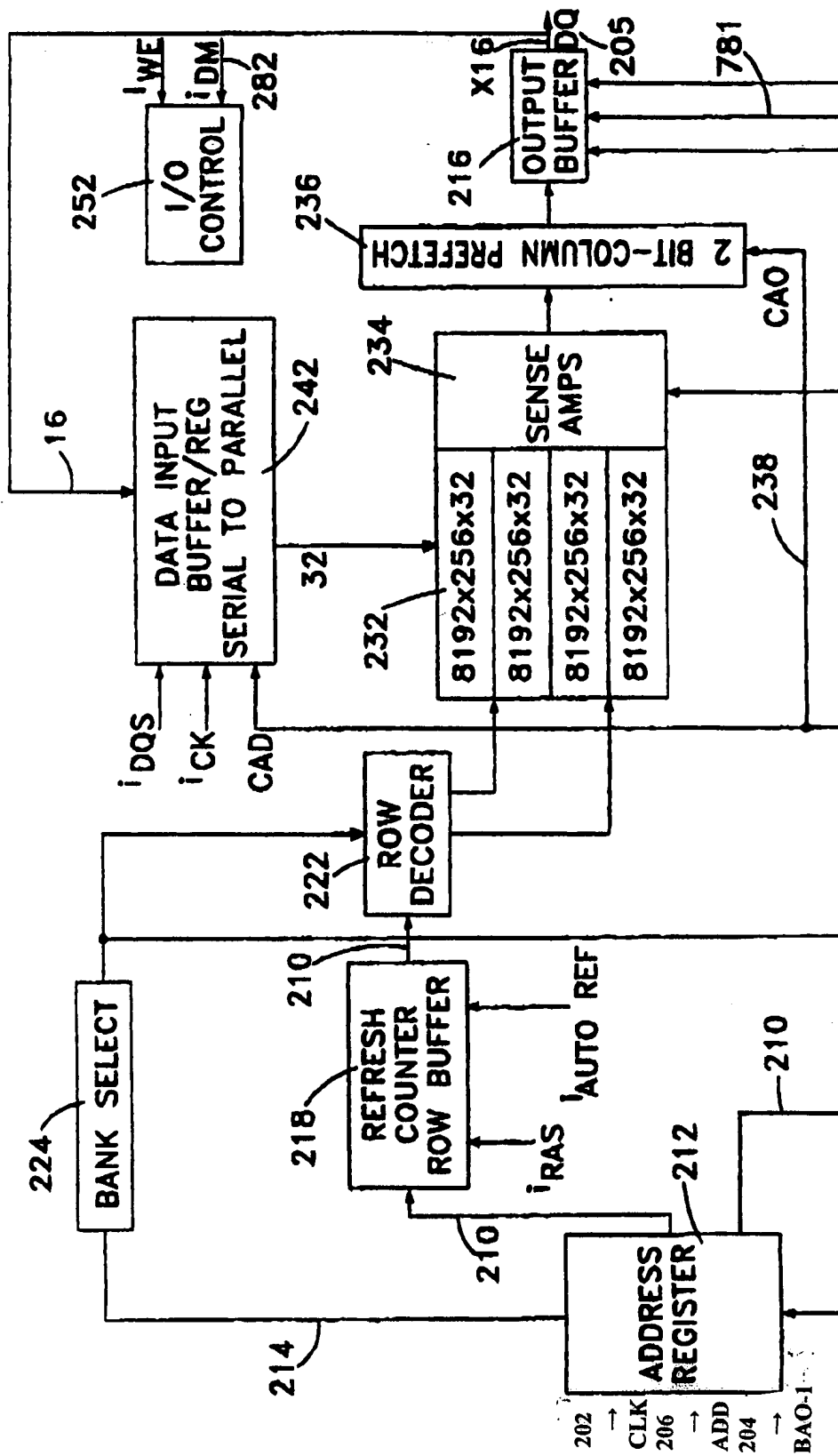


FIG. 7A

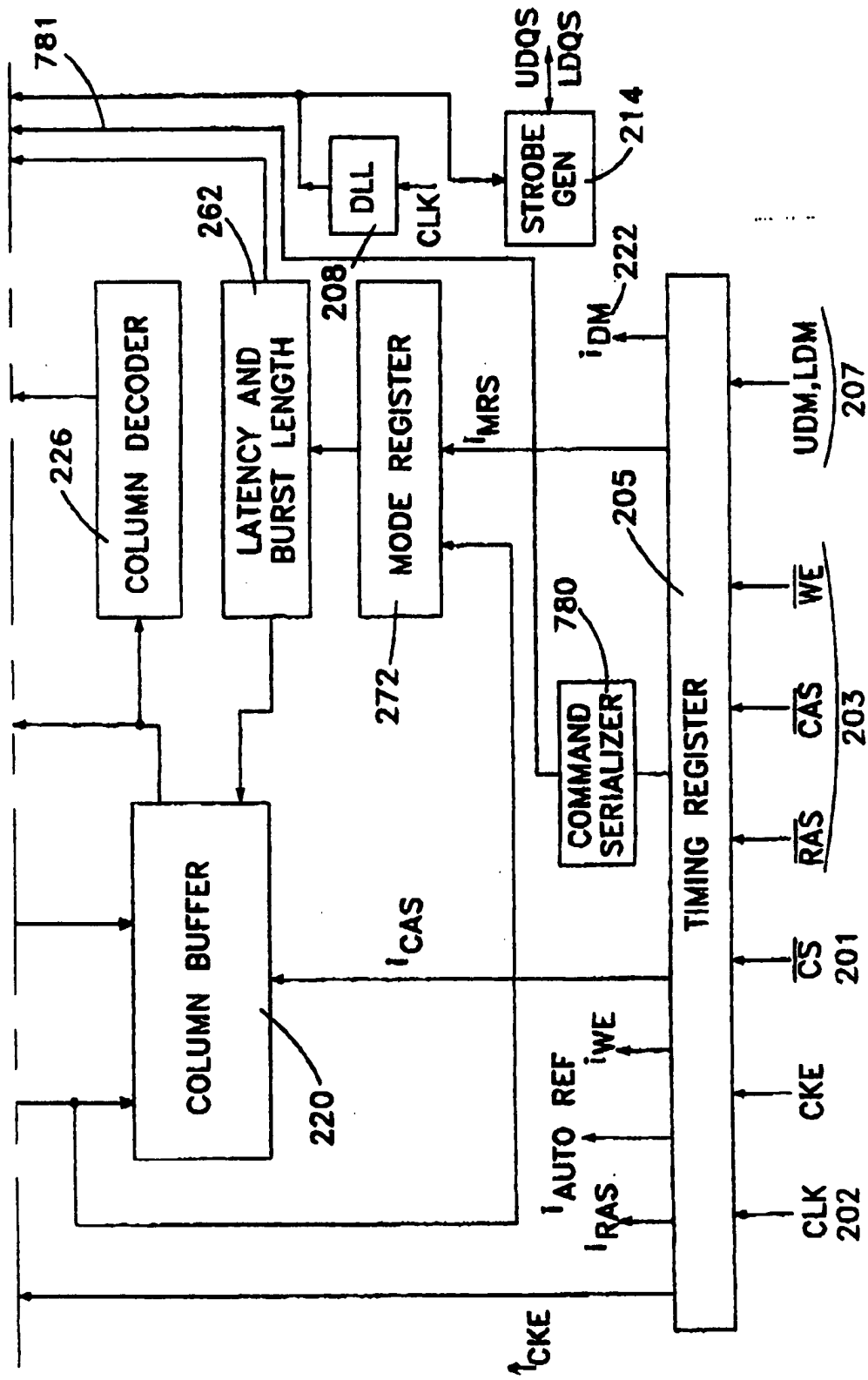


FIG. 7B

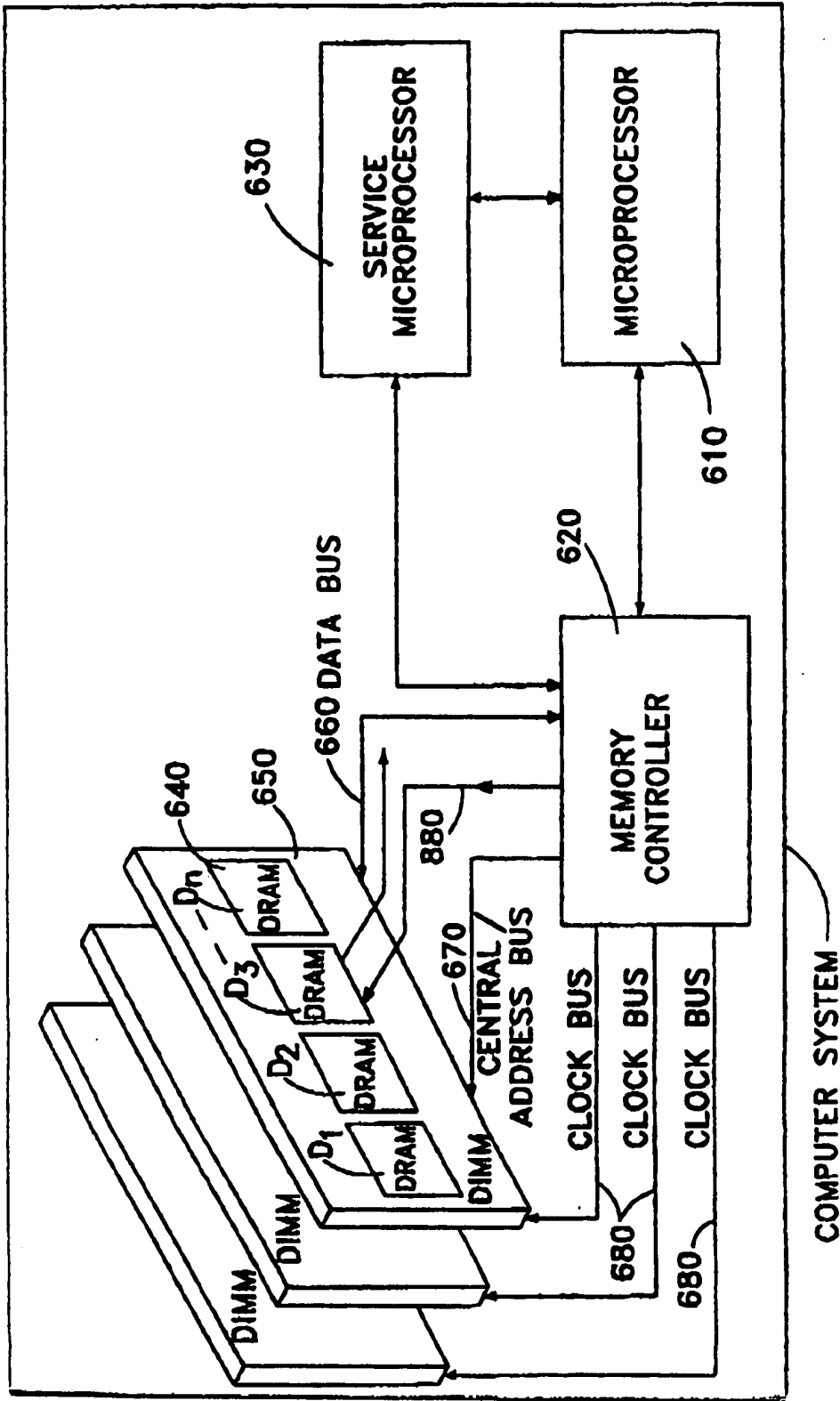


FIG. 8

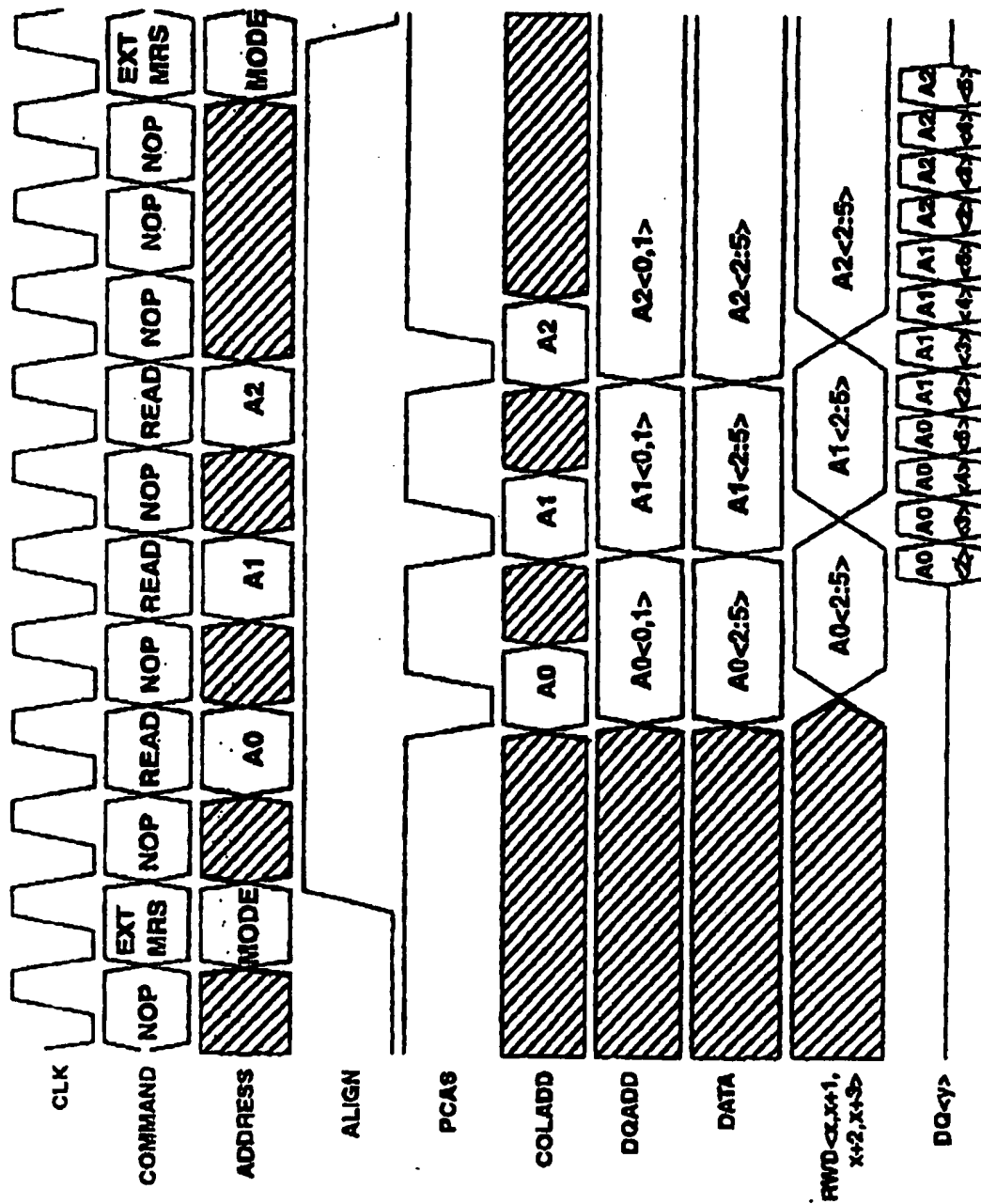


FIG. 9

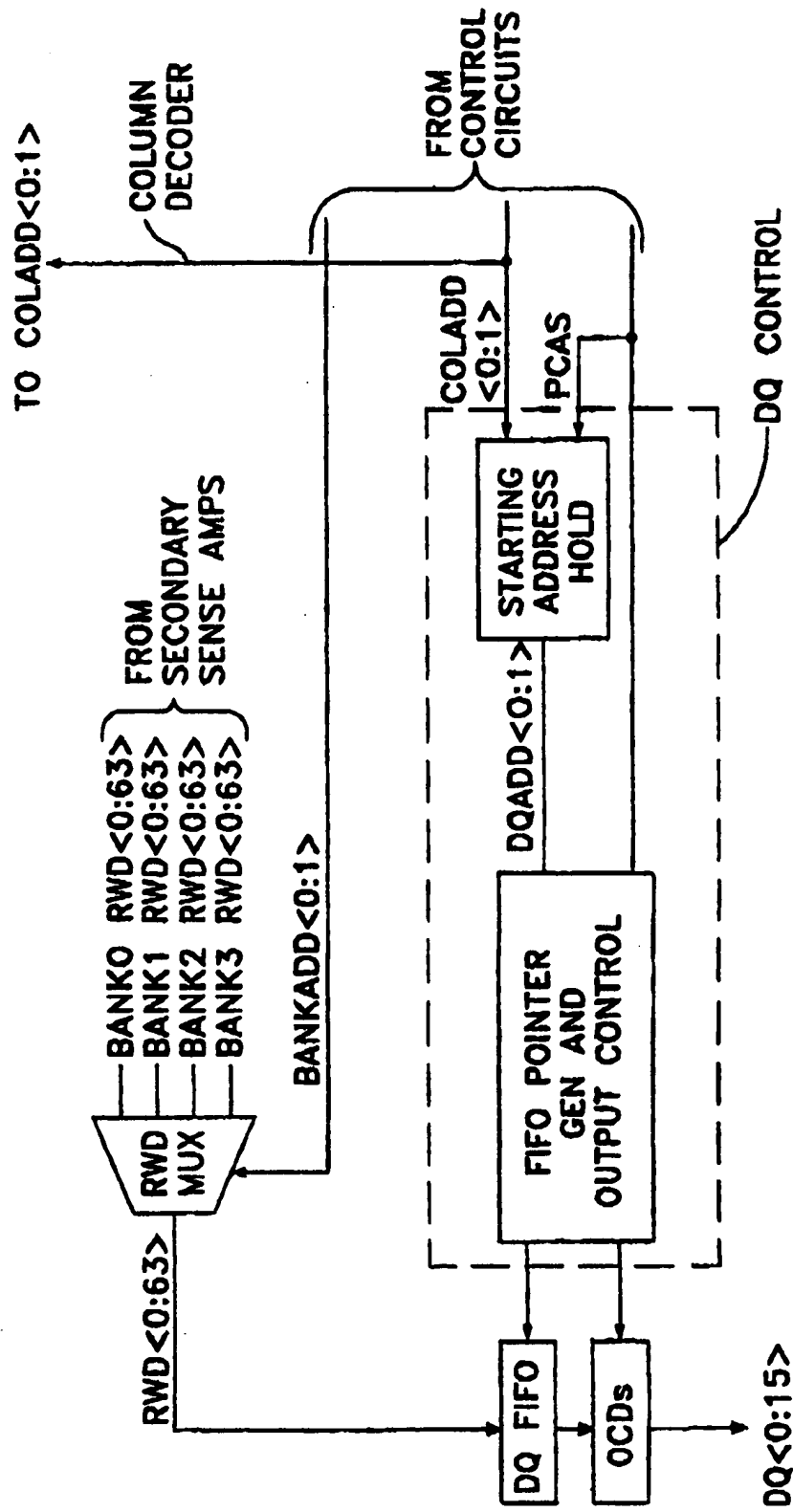


FIG. 10

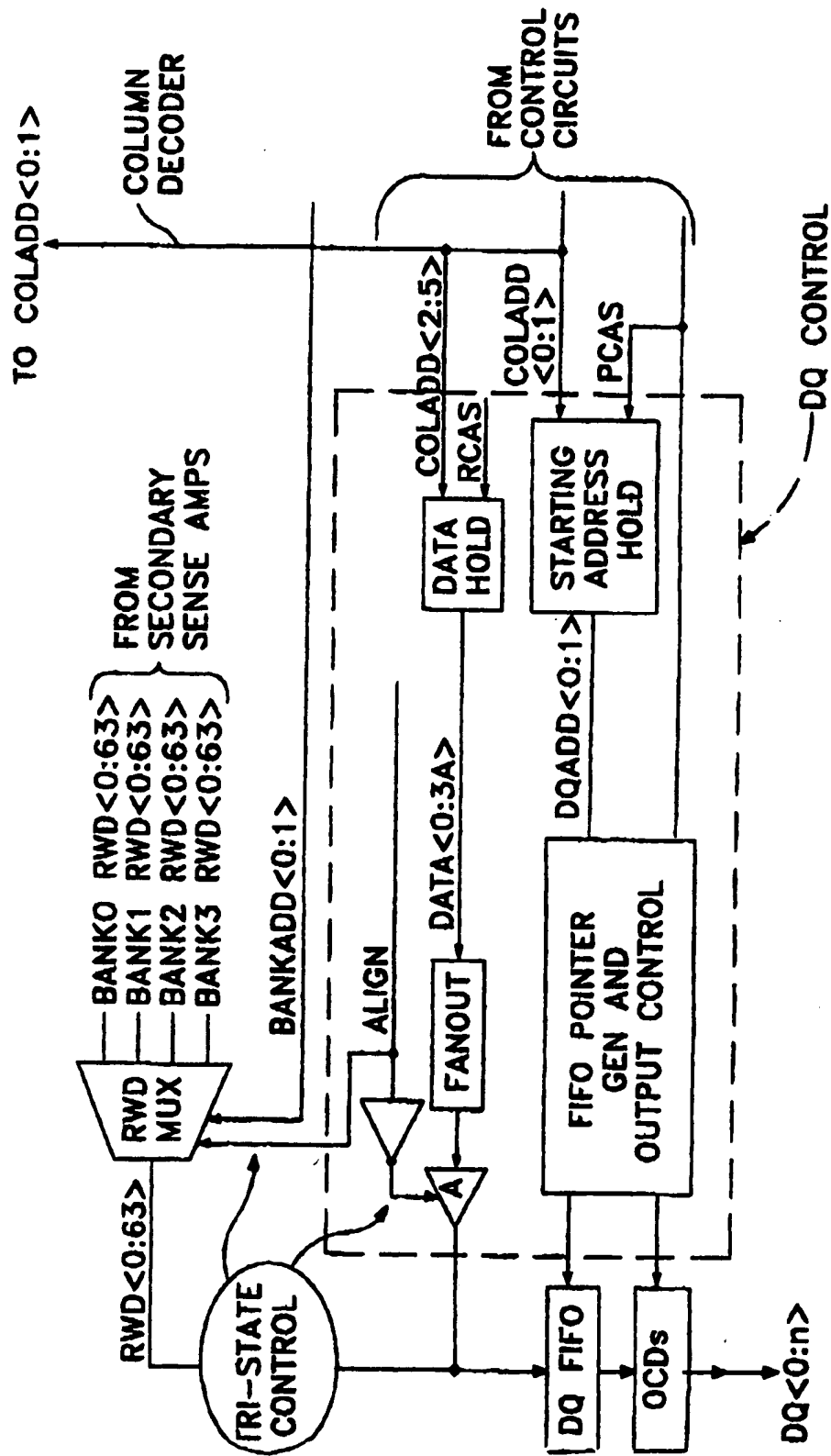


FIG. 11

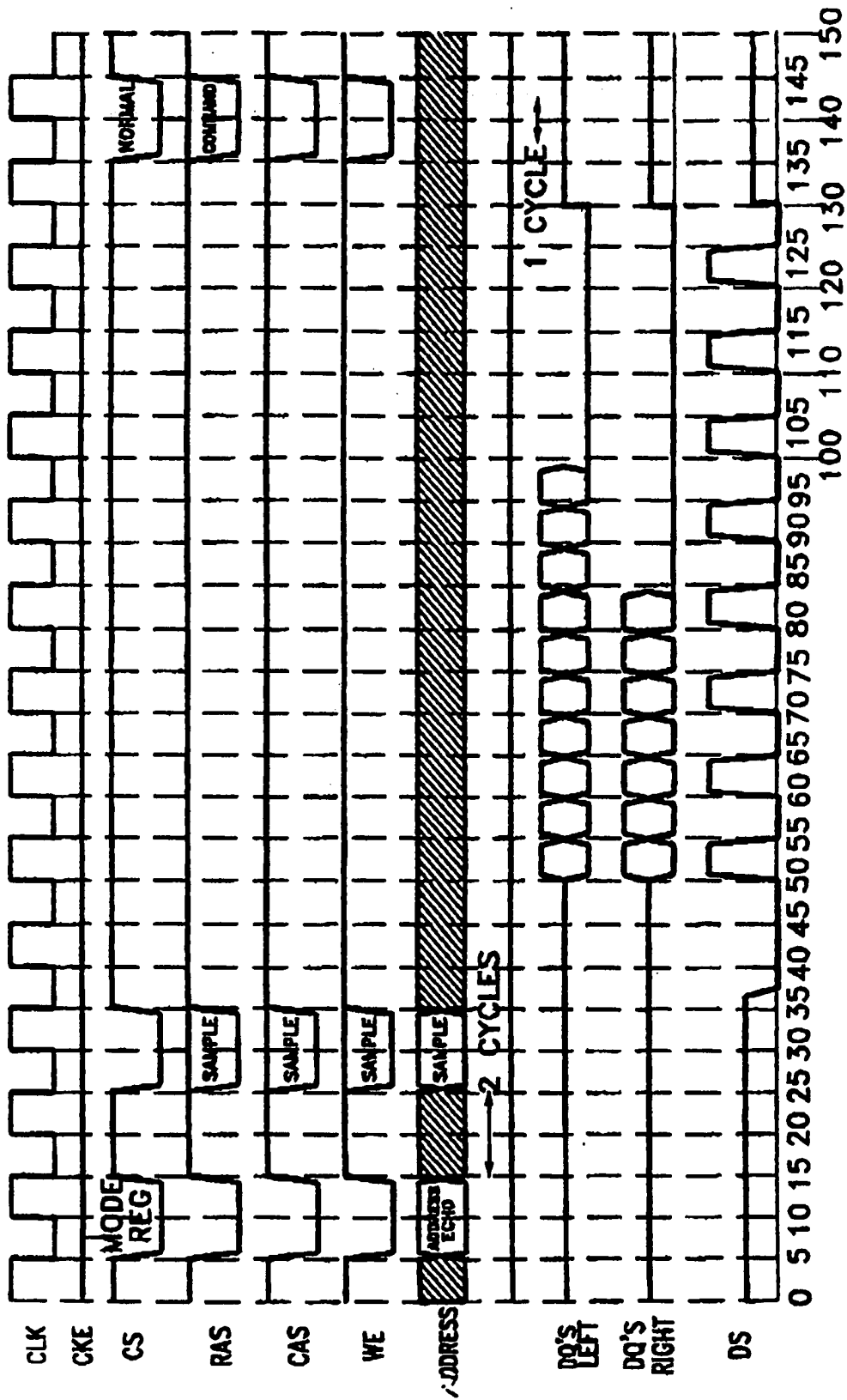


FIG. 12